

# 21<sup>st</sup> Century National-Scale Team Science Demo

UCSD and GSFC linked using OptIPuter technologies over a 10-Gbps lambda across the NLR and DRAGON networks



Attendees in GSFC's Scientific Visualization Studio (SVS) watch a real-time HD broadcast of welcome remarks by Larry Smarr from the University of California, San Diego (UCSD) displayed in lower left corner of the HyperWall.



GSFC's Milt Halem gives an in-person welcome.



The demonstration was a tribute to Al Diaz, NASA Associate Administrator, Science Mission Directorate (front right), who earlier contributed to the effort via support from GSFC's Internal Research and Development program.



A close-up view of Larry Smarr's (center) welcome, as UCSD colleagues V. Ramanathan (left) and Jean-Bernard Minster listen.



A large screen displays live visualizations of every time-step from a NASA fvGCM hurricane forecast running on the Columbia supercomputer at Ames Research Center (ARC).



SVS' Horace Mitchell explains how ARC's forthcoming National LambdaRail (NLR) connection will enable sharing of 3D visualizations with GSFC in real time.

J. P. Gary 8/31/05

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Using the HyperWall, GSFC hydrologist Christa Peters-Lidard describes Land Information System 1-kilometer data sets being transmitted across the NLR from an OptIPuter cluster at UCSD.



The SVS' Randall Jones describes the OptIPuter software used to display data on the HyperWall.



GSFC's Kevin Fisher calls up GrADS-DODS-generated displays of MAP '05 hurricane data transmitted across the NLR from an OptIPuter cluster at UCSD.



Arlindo de Silva, a GSFC meteorologist, discusses high-performance network-based use of GrADS-DODS for analyzing data sets prepared by the World Climate Research Program.



Using HD video-conferencing, UCSD participants Larry Smarr (left) and Jean-Bernard Minster speak about closer collaborations between the Scripps Institution of Oceanography and GSFC.



From right: NASA Associate Administrator of Science Al Diaz, NASA Program Manager Tsengdar Lee, and GSFC Earth-Sun Exploration Division Director Franco Einaudi.

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NASA Associate Administrator of Science Al Diaz (right) reflects on the significance of the demonstration.



Another view of attendees in GSFC's Scientific Visualization Studio with Milt Halem presenting.



Post-presentation discussions.



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Post-presentation discussions.



From left: network engineers Pat Gary, Paul Lang, Aruna Muppalla, and Bill Fink of GSFC's L-Net Project.